

# INNOVATIVE TECHNOLOGIES AND SUSTAINABLE USE OF FISHERIES AND BIOLOGICAL RESOURCES IN THE MEDITERRANEAN SEA (FISHMED-PHD)

## Section “PhD positions and scholarships” integrated on 05/06/2018

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<b>Starting date of the PhD Programme</b>	01/11/2018
<b>Duration</b>	3 calendar years
<b>Language of the PhD Programme</b>	Italian and English
<b>Mandatory stay abroad</b>	Yes (3 months)
<b>Associated partners</b> pursuant to art. 2, para 2, lett. d) of the M.D. n. 45/2013	CNR – Consiglio Nazionale delle Ricerche
<b>Research topics</b>	
<ul style="list-style-type: none"> <li>- Marine microbial metagenomes: study of microbial metagenomes from marine organisms (holobionts) and environments as indicators of ecosystems and organism health and functionalities;</li> <li>- Marine environment: relationship between environment and organisms; autecology and synecology, biological cycles of the species being harvested, and food webs;</li> <li>- Modeling gene regulation, biomineralization, growth, and population dynamics in marine calcifiers and fish species;</li> <li>- Genomic methods and life history traits as tools for fisheries management;</li> <li>- Fishery stock assessment methods;</li> <li>- Fishing innovative techniques and Technologies;</li> <li>- Marine microbial food webs, and food security;</li> <li>- Influence of contaminants (chemical and microbiological) on reproductive cycles, on food quality and on human biodiversity;</li> <li>- Bioremediation of impacted marine ecosystems (surface and subsurface water and sediments);</li> <li>- Aquaculture, restocking and relative environmental impact;</li> <li>- Human genetic variability of genes and pathways involved in lipid metabolism across Italy and the Mediterranean area: a focus on genetics, nutrition and health;</li> <li>- Natural resources and environmental economics;</li> <li>- Fisheries economics, product marketing and fishery chain;</li> <li>- Protection of the environment and resources: legal bases, organizational, and innovative elements and tools for ecosystem-based fishery management;</li> <li>- Community legislation on fisheries, national rules in the Mediterranean countries and EUSAIR;</li> <li>- International Fisheries Organizations operating in the Mediterranean: objectives and functioning;</li> <li>- Sustainable exploitation of marine bio-resources (microbes, biomass and fish processing by-products and wastes);</li> <li>- Citizen Science: communication, involvement of volunteers, large-scale spatial and temporal monitoring, dissemination, environmental education.</li> </ul>	
<b>PhD positions and scholarships</b>	
<p><b>Positions with scholarship linked to specific topics</b> (art. 9 of the Call for applications)</p> <p>During the oral examination, applicants will have the possibility to show their interest for one or more scholarships linked to specific topics.</p> <p>Taking into account the preferences expressed by the applicants and with due consideration of the applicants' skills and expertise, the Admission Board will establish if the applicants can be considered eligible for the allocation of the scholarships linked to specific topics</p>	<p><b>2</b> - totally funded by the University of Bologna general budget and focused, respectively, on the following research topics:</p> <ul style="list-style-type: none"> <li>- “Impact of aquaculture on the microbial communities and on marine holobiont”</li> <li>- “Multiscale comparative analysis of the process of bio-mineralization of small pelagic fishes’ otoliths”</li> </ul> <p><b>1</b> - co-financed by the Department of Pharmacy and Biotechnology – FaBiT, the Department of Biological, Geological and Environmental Sciences – BiGeA and the Department of Civil, Chemical, Environmental, and Materials Engineering - DICAM, focused on the research topic: “Involvement of both the associations of professionals operating in the sea and fisheries field and of the final users in scientific research: participation in scientific research for large-scale spatial and temporal monitoring of marine biodiversity”</p> <p><b>3</b> - funded by CNR, focused, respectively, on the following research topics:</p> <ul style="list-style-type: none"> <li>- “Assessing the state of the demersal species stock and of management measures in the Adriatic Sea”</li> <li>- “Multidisciplinary approach for the calm digging management”</li> <li>- “Spatial approach to the fisheries management”</li> </ul> <p><b>1</b> - financed by Regione Emilia-Romagna within the program “Alte Competenze per la ricerca, il trasferimento tecnologico e l'imprenditorialità” – Title of the research project: “Innovative microbiome-based systems for the improvement of productivity, safety and sustainability of mussels and fish farming”.</p>
<b>Admission requirements</b>	

Please, see art. 2 of the Call for applications	
<b>Mandatory documents to be attached to the application</b>	
Please, see art. 3 of the Call for applications	
<b>Further qualifications that may be attached to the application, if in possession of the applicant</b> (only qualifications attested by documents drawn up in Italian, English, French, German and Spanish shall be considered as valid and assessed by the Admission Board)	
<ul style="list-style-type: none"> <li>- Abstract of the second cycle master's degree thesis. Undergraduate applicants may submit the draft of the thesis approved by their supervisor (please, note that abstracts cannot exceed 5.000 characters, including spaces and formula possibly used. The above figure does not include: the title of thesis, the outline, and images such as graphs, diagrams, tables etc. - where present);</li> <li>- No more than 2 reference letters signed by Italian and international academics and professionals in the research field, which do not form part of the Admission Board, attesting the suitability of the applicant and his/her interest for the scientific research. <u>Please, note that the above letters cannot be uploaded by applicants. When filling the online application form on <a href="http://studenti.unibo.it">http://studenti.unibo.it</a>, applicants will be only allowed to provide the email accounts of the requested academic/professional. The latter shall receive an email from the University of Bologna providing for the instructions for uploading. Only letters in pdf format submitted before the expiry date and time of the Call shall be accepted.</u></li> <li>- Multi-annual research project, with special emphasis on the activities to be completed during the first-year course. The proposal must meet the following requirements: <ul style="list-style-type: none"> <li>o It must indicate in the cover page the research topic of the PhD Programme covered by the research project proposal and for which the applicant is applying (up to 3 maximum)</li> <li>o It cannot exceed 20.000 characters, including spaces and formula possibly used. This figure does not include: the title of project, the outline, references and images (such as graphs, diagrams, tables etc. - where present);</li> <li>o It must include: the state of the art; description of the project; expected results; lead-time for implementation; references.</li> </ul> <p>The research projects that successful applicants shall carry out during their doctoral career may possibly differ from the project proposed at the application stage. This shall be defined together with the supervisor and approved by the Academic Board.</p> </li> <li>- Motivational letter. This must include the reasons prompting the applicant to attend the PhD Programme and those relevant experiences and research interests, that make the applicant suitable for the specific PhD Programme (3000 characters maximum, including spaces).</li> <li>- Publications <i>in extenso</i> (monographs, articles published on scientific journals): max 5.</li> <li>- Minor publications <i>in extenso</i> (conference papers, volume's chapters, etc.): max 5.</li> <li>- Abstracts and posters presented during national and international conferences, etc.: max 5.</li> <li>- Professional Master courses completed in Italy (1st or 2nd level) relevant to the PhD Programme.</li> <li>- Postgraduate vocational training programmes/specialisation programmes relevant to the PhD Programme.</li> <li>- Research activity of any kind - whether basic, applied, translational, etc. - carried out in any capacity, including when covered by research grants, and as a staff member of research projects.</li> <li>- Work activity.</li> <li>- Vocational internships;</li> <li>- Curricular and non-curricular training and guidance internships</li> <li>- Foreign languages</li> <li>- Study periods completed by students outside their countries of origin (e.g. Erasmus programme or other similar mobility programmes).</li> <li>- Other qualifications attesting the suitability of the applicants (scholarships, prizes, etc).</li> </ul>	

<b>Admission exams</b> (art. 4 of the call for applications)		
<b>Examination type</b>	<b>Schedule</b> (please, note that applicants shall not receive any communication concerning the exams schedule)	<b>Examination results publication</b> (please, note that applicants shall not receive any communication concerning the publication of results)
<b>Qualifications and research project evaluation</b>	Non-presential.	The results of the qualifications and research project evaluation shall be available online starting from the <b>07/06/2018</b> at the page <a href="http://studenti.unibo.it">http://studenti.unibo.it</a> (please, select: (please, select "summary of the requests in progress" - "see detail" and open the pdf file "risultati valutazione titoli e progetto")
<b>Oral examination</b>	<b>Date</b> <b>21/06/2018</b> In case that the oral examination cannot be completed in one day due to the large number of applicants, the oral exam schedule shall be made available at the webpage <a href="http://studenti.unibo.it">http://studenti.unibo.it</a>	The results of the oral examination shall be available on the webpage <a href="http://studenti.unibo.it">http://studenti.unibo.it</a> starting from <b>22/06/2018</b> (please, select "summary of the requests in progress" - "see detail" and open the pdf file "risultati prova

		together with the results of the qualifications and research project evaluation	orale”)
	<b>Place</b>	Fano (PU), Viale Adriatico 1/N Laboratorio di Biologia Marina e Pesca – BiGeA – Università di Bologna	
	<b>Time</b>	10 a.m.	
Pursuant to art. 4 of the call for applications, applicants residing regularly abroad can ask to take the exam remotely using videoconferencing tools (e.g. Skype). Please, for further details refer to the relevant provision laid down in the Call for applications.			

### Evaluation criteria

Points will be allocated to applications out of a total of 100 on the basis of the following weighting:

#### 1. Qualifications and research project

- Minimum for admission to the oral exam: 30 points
- Maximum: 50 points

Only qualifications relating to the last 5 years shall be taken into consideration, with the exception of the University Degree (Diploma di laurea). Please, note that qualifications must be consistent with the PhD course.

Points relating to qualifications shall be allocated on the basis of the following criteria:

- Graduation final mark. Undergraduates shall be evaluated on the basis of the Weighted Average Mark (WAM): max 15 points
- Publications: max 10 points
- Motivation letter: max 6 points
- Reference letter and other qualifications: max 4 punti

Points relating to the research project shall be allocated on the basis of the following criteria:

- Scientific value and ground-breaking nature of the proposal: max 9 points
- description and structure of the proposal: max 3 points
- proposal feasibility: max 3 points

#### 2. Oral examination

- Minimum for inclusion in the final ranking list :30 points
- Maximum: 50 points

Oral examination includes the presentation of the research project and is intended to assess the suitability of the applicant in respect of the pursuing of scientific research as well as the general knowledge of issues connected to the PhD course.

During the oral examination, knowledge of the following foreign language shall be assessed: English.

The oral examination is carried out in Italian or in English.

Points relating to the oral examination shall be allocated on the basis of the following criteria:

- knowledge of the foreign language: max 5 points
- research project presentation: max 35 points
- general knowledge of issues connected to the PhD course: max 10 points

Possible evaluation sub-criteria shall be made public on <http://studenti.unibo.it> (select: “summary of the requests in progress” - “see detail” and open the pdf file named “sub-criteri di valutazione”).

### Final ranking list and enrolment (arts.6 and 7 of the call for applications)

Only after the publication of the results relating to the oral exam, the final ranking list shall be available at the page <http://studenti.unibo.it>. In the section “Summary of requests in progress”, the status of the application submitted shall be “Final ranking List available”. A click on “See detail”, will open the webpage where the pdf file “Graduatoria” can be downloaded (at the bottom of the page).

Please, note that written communication about the final results and the deadlines for the enrolment shall not be sent to the applicants.

The enrolment of successful applicants must be completed by the deadline laid down at the bottom of the final ranking list.